

NOTHING FINE CAN BE SAID OF ANY CRAFT



200 H. P.

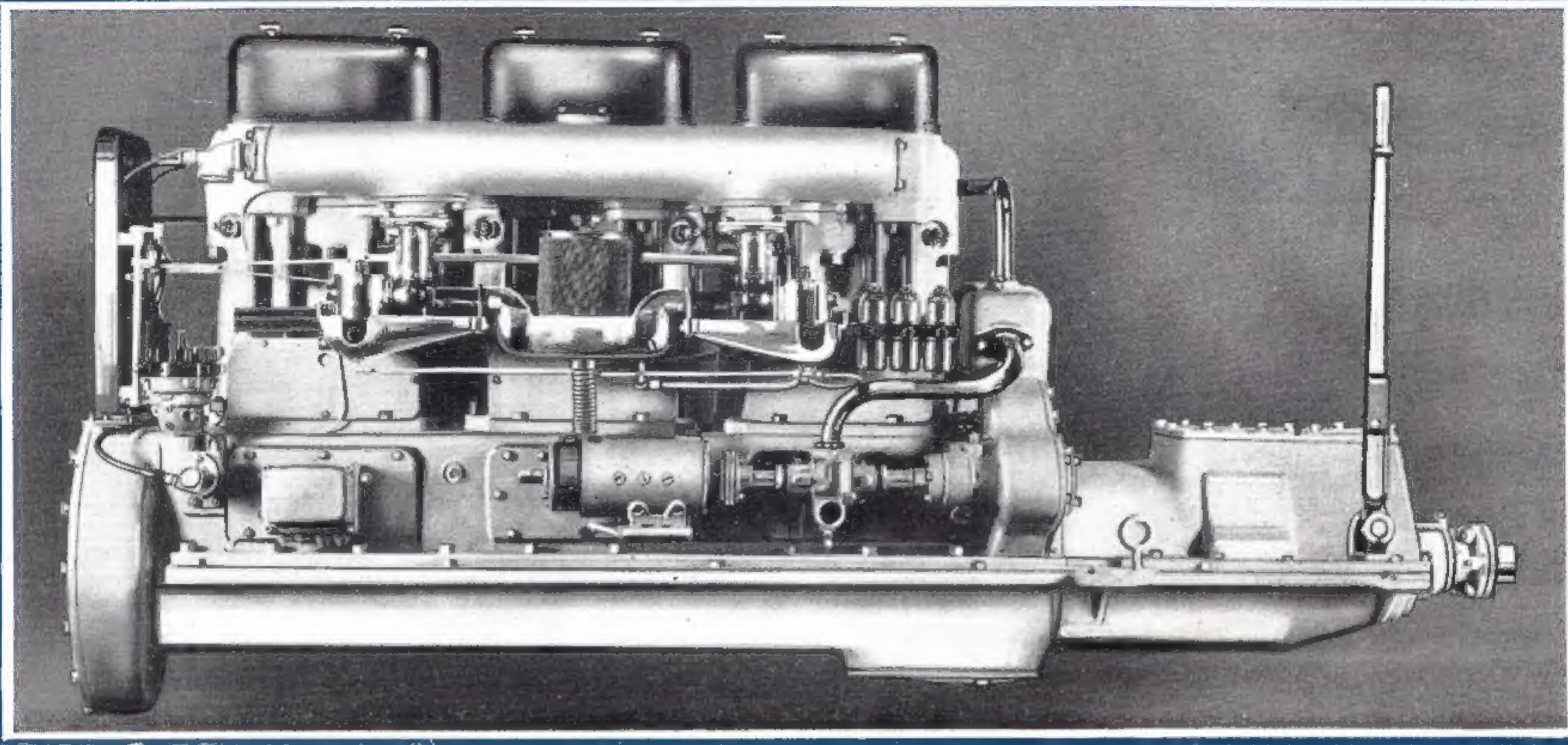
Buffalo  
Dreadnaught

MARINE ENGINE

SIX CYLINDERS — 5 $\frac{7}{8}$  In. Bore  
7 In. Stroke

**Buffalo Gasolene Motor Co.**  
1286 Niagara St.,  
Buffalo, N.Y.

347 Madison Ave.,  
New York, N.Y.



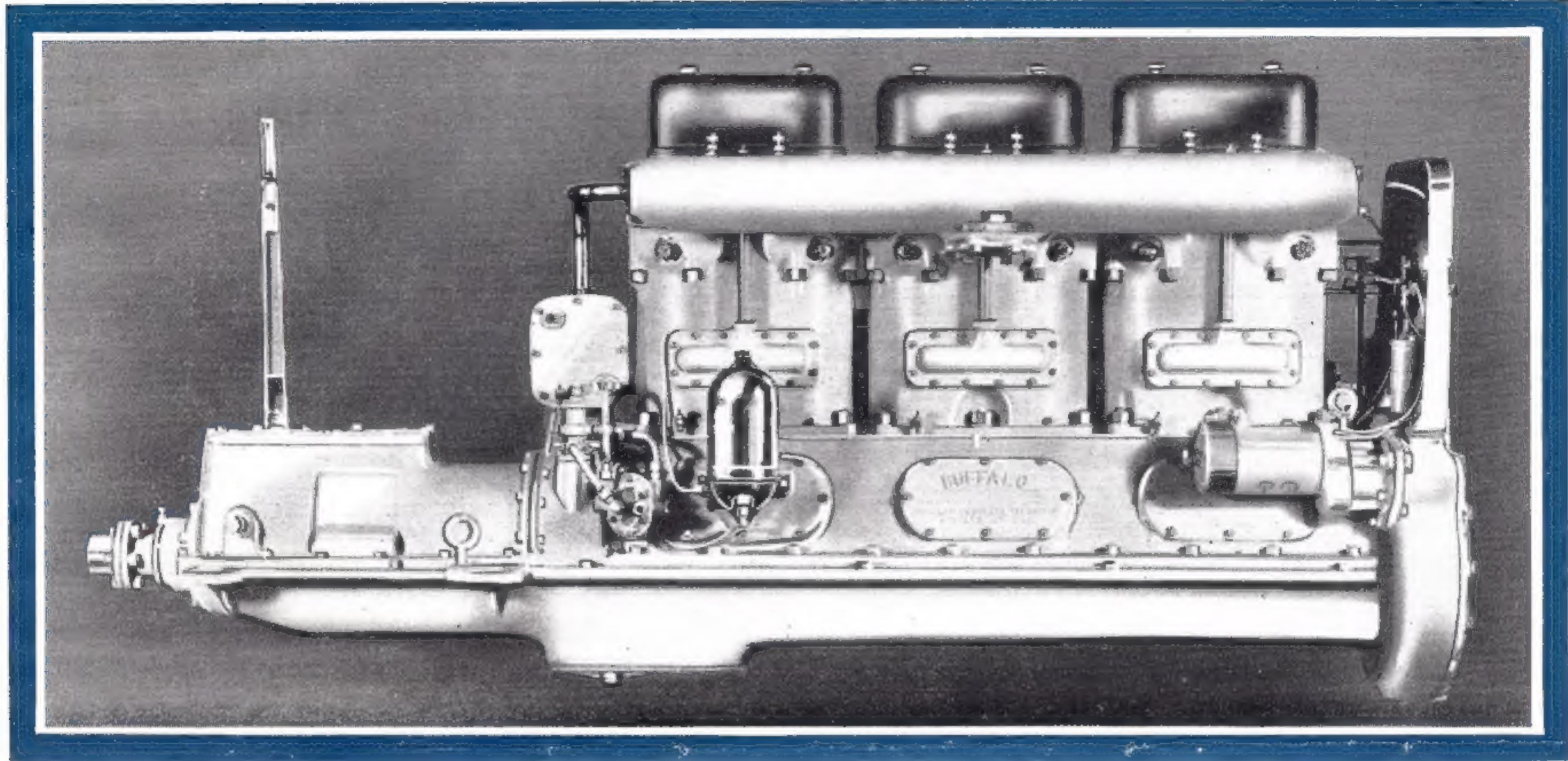
**Buffalo** again leads in contributing a high quality marine engine at a remarkably low price.

Since 1899 the Buffalo Gasolene Motor Company has pioneered in the development of successful marine engines. The BUFFALO-DREADNAUGHT is the result of tried and proven engineering practice; these engines are built of the finest material procurable, machined to precision with modern equipment by men of long experience in the manufacture of internal combustion engines. The wonderful records made by "BUFFALO" engines and the reputation they have gained for exceptional power and long service proves that the design

is right. This is further shown by the thousands of engines that have been produced and demonstrated in actual service under the most exacting conditions.

The BUFFALO-DREADNAUGHT is a powerful, quiet, smooth-running power unit. Vibration has been eliminated and long service is assured by the extensive use of alloyed metals of great tensile strength. In designing and constructing this engine not a single item making for efficient dependable performance has been overlooked. The more exacting the requirements the greater you will appreciate that this dependable engine possesses everything that wins you to a fine power unit for your boat.

*"The Engine of Constant Service"*



#### LOWER BASE:

A rigid iron casting extending the full length of the engine, containing seven main bearings which carry the crankshaft. The crankshaft is not hung in the upper base which means absolute freedom from bearing trouble and vibration. Bearing caps are of manganese bronze secured to base with alloy steel studs.

#### UPPER BASE:

Bridge construction of cast iron. Extra large hand hole plates on both sides to permit inspection and adjustment of main and connecting rod bearings. Contains seven large camshaft bearings.

#### CRANKSHAFT:

Hammer forged, alloy steel, double heat treated and machined all over. Diameter 3.125"; seven main bearings with a total bearing surface of 236 sq. in. Balanced and drilled for pressure lubrication to all main bearings and connecting rod bearings. Forward end of shaft has integral flange to which flywheel is attached with fitted bolts.

#### CYLINDERS:

Close grain gray iron, special alloy, heat treated, cast in pairs, water jacketing extending full length. Designed for exceptional strength and rigidity. The ease with which the cylinder block can be replaced is a desirable feature. Incoming cooling water can be controlled so that uniform jacket temperature may be maintained thus eliminating distortion.

#### CYLINDER HEAD:

Close grain gray iron, heat treated, detachable. Internal water passages surround the valve seats ensuring uniform cooling. Casting exceptionally deep, eliminating warping. Combustion chamber is fully machined forming a smooth surface to which carbon does not readily adhere.

#### CONNECTING RODS:

Alloy steel, drop forged, heat treated, I-beam section lower end having steel backed, babbitt lined bearings 3.00" in diameter, 2.365" long. Positive lubrication under pressure.

#### FLYWHEEL:

Gray iron, statically and dynamically balanced, fitted with ring gear for electric starting motor.

#### BEARINGS:

Connecting rod bearings steel backed babbitt lined. Main bearings are heavy bronze backed babbitt lined shells. Accurately machined, fitted into lower crankcase and bearing caps. Quickly replaceable.

#### PISTONS:

Aluminum alloy, special design which prevents stresses at piston pin being transmitted to skirt. Length 6.125". Three compression rings and one oil control ring above piston pin and one ring at lower end of skirt. Rings .187" wide.

#### PISTON PINS:

Tubular alloyed steel, clamped in connecting rod. Diameter 1.50".

#### CAMSHAFT:

Alloyed steel, 1.25" diameter, solidly set in seven bearings, operated by helical gears. Accessible. Lubrication to all bearings and cams.

#### VALVES:

Located in cylinder heads, special design, silchrome steel, operated by push rods and rocker arms which are adjustable. Two valves per cylinder fitted with double springs. Inlet valve—clear diameter 2.625", lift .618". Exhaust valve—clear diameter 2.625", lift .618".

#### ROCKER ARMS:

Drop forged alloy steel, adjustment over push rods, drilled for pressure lubrication.

#### PUSH RODS:

Alloyed steel, hollow construction, hardened and ground. Enclosed, extra large. Fitted with large rollers for cam action. Push rod guides of large diameter, bronze, removable.

#### GEARS:

Crankshaft, camshaft and accessory drive gears are of the helical type selected for silence and endurance. Main timing gear of special gear bronze leaded to reduce noise. Crankshaft and other gears alloy steel.

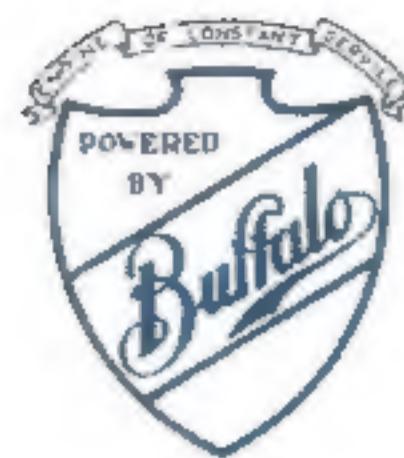
#### MANIFOLDS:

Inlet and exhaust castings of close grain gray iron. Full water jacketed, internally smooth facilitating passing of gases. Correctly designed for even distribution of fuel. Flange connection for exhaust pipe optional (see installation drawing).

#### LUBRICATION SYSTEM:

Dry sump system, full pressure feed to main bearings through crankshaft to connecting rod bearings. Oil is forced through the hollow rocker arm shaft to rocker arms which have oil passages to push rods. Oil is retained in pockets at cam-shaft and all drive gear bearings in ample quantity to lubricate gears and bearings when engine is started until the complete oiling system is filled and functioning. Separate service tank instead of usual sump in engine is used. Double

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oil pump takes oil from service tank and delivers it through oil cooler under high pressure through the distributing lines to the main bearings. Scavenging pump picks up oil in engine base and returns it to service tank, first passing it through a Purolator oil filter which is so designed as to permit easy cleaning. The residue is deposited in the sump and can be removed. This system is designed to give fresh, clean, cool oil to all bearings which reduces bearing trouble and increases the life of the engine.

## WATER COOLING SYSTEM:

Bronze water circulating pump using double helical gears for quiet operation, located on inlet side of engine. Cooling water circulation so arranged that water is warmed before entering cylinder jackets, passing first through the oil cooler then to exhaust manifold, then to the cylinder jackets and the cylinder heads, discharging after passing through the inlet manifold jackets thereby preheating and assisting in vaporizing the incoming fuel. This adds greatly to the efficiency and economy of the engine. By-pass control valves arranged so that equal distribution of water is provided for each cylinder block maintaining a uniform temperature.

## IGNITION SYSTEM:

Delco Remy two spark high tension distributor and battery system, firing two spark plugs in each cylinder or double system with independent battery and high tension magneto all driven independently and operating separate sets of spark plugs, as preferred, as an extra.

## **ELECTRIC STARTING AND GENERATING SYSTEM**

Regular equipment is a 12 volt system, including electric starting motor which is ruggedly constructed, starting engine through double reduction geared bendix drive. The generator is a 12 volt, 5" diameter, 3 brush, current controlled generator. Cutout relay automatically disconnects the battery so the battery will not discharge back through generator when engine stops. Magnetic starting switch is operated

by means of remote control button and helps protect storage battery from excessive discharge due to long cranking.

## CARBURETORS:

Two carburetors are provided, selected for their efficiency and economy; fitted with interconnecting air intake arranged with an Air-Maze back fire screen which retards the propagation of carburetor back fire flame to the engine compartment. Drip pans are fitted under the carburetors arranged with suction pipe to draw off gasoline.

## **FUEL SYSTEM:**

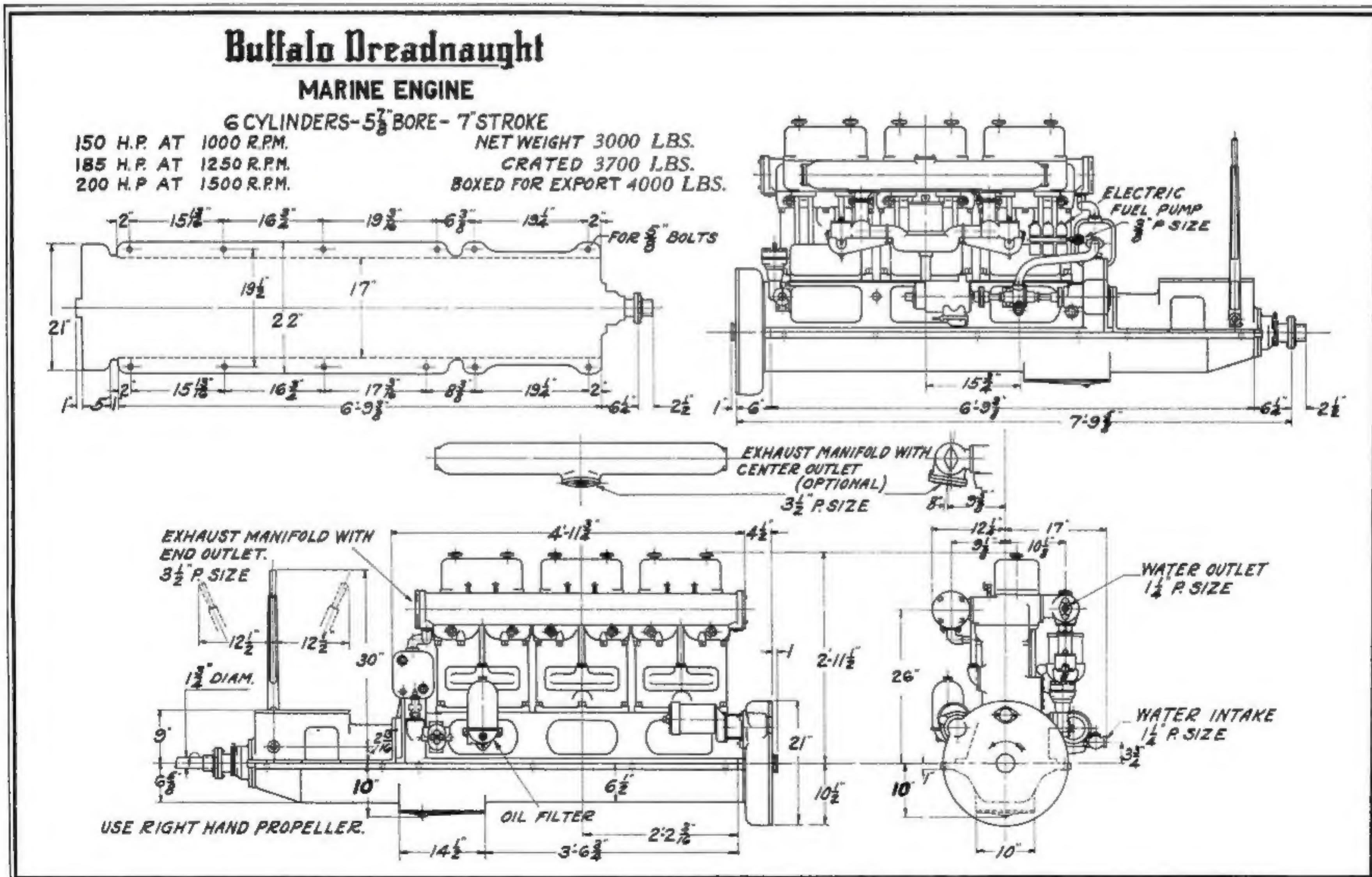
Autopulse electric fuel pump mounted on side of engine draws fuel from main fuel tank and delivers it to the carburetors.

## CLUTCH AND REVERSE GEAR:

The clutch and reverse gear is quiet running and dependable, well balanced and sturdy. Oversize, of ample capacity for the most severe service. The disc clutches (one located at each end of the gear) effectively transfer the forward driving strains from the gears to the disc clutches. This is exceedingly important for long life and smooth action and ensures against undue wear, distortion and breakage of teeth. The bronze and steel discs are made extra heavy to avoid warping and give a more reliable neutral and longer life. A large thrust bearing is provided. The reverse gear is lubricated by pressure direct from the main crank shaft. Adjustments can easily be made through hand hole cover on reverse gear housing.

## ON REVERSE GEAR IN CONTROL PANEL:

Of cast iron, mounted over flywheel housing. All controls, gauges and instruments are conveniently arranged including spark and throttle controls, ignition switch, electric fuel pump switch, electric starter button, primer, ammeter, oil pressure gauge, motometer and tachometer. This is supplied complete at an extra cost.



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